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A COMPARATIVE STUDY OF THE CURRIC-
ULA FOR MEN AND WOMEN IN THE
COLLEGES AND UNIVERSITIES
OF THE UNITED STATES

A THESIS

Presented to the Faculty of the Graduate School
of Cornell University for the degree of
DOCTOR OF PHILOSOPHY

BY

MARGUERITE WITMER KEHR

Reprinted from the Journal of the Association of Collegiate Alumnae,
Vol. XIV, No. 3, December, 1920

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A COMPARATIVE STUDY OF THE CURRICULA FOR MEN AND WOMEN IN COLLEGES AND UNIVERSITIES OF THE UNITED STATES

MARGUERITE KÉHR.

The problems of education are continually under discussion and this is especially true at a time when the critical spirit aroused by the war is weighing the merits of all our social institutions. The education of women will have a large share in this criticism because women have demonstrated during the war ability not only to do their own work but also to step into men's places when necessary. The conditions of the war and its aftermath "will constitute a challenge to the colleges, force us to analyze the place of women in society and to draw conclusions from this analysis as to the methods and types of education best adapted, not to the vocational or the cultural needs of women, but to the social contributions which they are expected to make through every phase of their contacts with the community, vocational or otherwise."¹

As a contribution to this discussion, the writer made a comparative study of the educational opportunities open to women with those of a similar kind open to men, since it is a common assumption that institutions for men set the standard. The first part of this paper is devoted to a brief summary of method and results, while the second part deals with

the conclusions drawn from these results.

Since there are three types of higher educational institutions open to women, it was necessary to make a selection from each. In order to choose colleges of the highest grade, use was made of the lists of accredited institutions prepared by the Association of American Colleges, the Association of American Universities and the Carnegie Foundation for the Advancement of Teaching. A further criterion employed was the chapter list of the Phi Beta Kappa honorary fraternity.

Independent Colleges for Women

Among the institutions of this type the following were selected as typical of the best schools in the group and as representing differences in size and nature:

	Students
Smith -----	2,078
Vassar -----	1,120
Holyoke -----	857
Goucher -----	712
Wells -----	234

	Students
Yale -----	1,391
Princeton -----	1,220
Williams -----	554
Bowdoin -----	456
Trinity -----	227

(In Connecticut)

The second column lists five independent colleges for men chosen on the same basis and approximating in some degree the size of the women's colleges with which they were compared. The figures given are limited to the undergraduate college of arts

¹ Mary van Kleeck: A Census of College Women. Journal of the Association of Collegiate Alumnae, Vol. IX, No. 9, May, 1918, p. 570.

and sciences in the men's institutions since that is most closely akin to the colleges for women. All the latter named above are members of the Association of American Colleges; all in both groups are listed by the Association of American Universities¹ and by the Carnegie Foundation (with the exception of Goucher); and all but Wells have chapters of Phi Beta Kappa.

The first step in comparing the curricula of these institutions (as described in their most recent catalogues) was the separation of required from elective work. The unit used was the semester hour, that is, one hour a week for a semester. The amount of required work varies in the women's colleges from 36 hours (Vassar) to 60 hours (Holyoke) and in the men's colleges from 24 hours (Williams) to 84 hours (Trinity).² The latter figures should probably be smaller since they include some preparatory work. The required subjects common to the majority of schools in both groups³ are the same, with the addition of Economics and the omission of History and Bible in some of the institutions for men. A comparison of the nature and amount of required work, therefore, showed only slight differences which balance rather evenly. Colleges for women tend to emphasize English and History,

while men's colleges give more attention to Modern Languages, Mathematics and Science. A further difference is found in the B. S. and Ph. B. courses in the latter institutions which permit a student to complete the course without work in the Classics.

Since the number of hours required for major and minor studies was found to be practically the same, it is evident that both groups permit almost the same freedom of election. The next step was, accordingly, a comparison of all courses offered. Since four of the men's colleges confer two baccalaureate degrees (in the college of arts and sciences), one would expect to find wider scope in their curricula than in the colleges for women. Such is not the case, for a comparison of the subjects common to the majority of institutions in both groups⁴ showed that the colleges for women offer a larger number of hours in most of the subjects named. It is remarkable that this should be true of almost all the main divisions into which the curriculum can be divided: Classics, Modern Languages, English, History, Education and its allied subjects, Mathematics and the Fine Arts. There is approximate equality in Economics-Political Science-Sociology and in Science, but in none of these divisions do the institutions for men offer a larger number of hours. This may in some degree

¹ Yale and Princeton are members of the Association.

² 120 semester hours are required for the degree in all the independent colleges studied.

³ Classics, Modern Languages, English, History, Mathematics, Science, Philosophy (Psychology), Bible, Economics.

⁴ Archeology, Latin, Greek, German, French, Spanish, Italian, English, Public Speaking, History, Economics, Political Science, Sociology, Bible, Education, Philosophy, Psychology, Mathematics, Astronomy, Physics, Chemistry, Geology, Geography, Biology, Physiology, Hygiene, Art, Music.

be explained by the fact that the women's colleges chosen are all slightly larger,—both in number of students and in total number of hours in the curriculum—than the corresponding arts colleges of the men's institutions.

There remained, however, a further comparison necessary for a complete understanding of the nature of the institutions in each group, and it was here that the difference between independent colleges for men and for women became evident. Many of the former have developed schools or colleges for professional training while none of the latter provides any organized work of this kind. The nearest approach is found in the Smith College Training School for Social Work, open to college graduates, which provides two summer sessions at the college and nine months of field work.

In order to make sure that the above statement with regard to omission of professional training is true of independent women's colleges as a group, the remaining schools of approximately equal rank were studied. Randolph-Macon Woman's College provides no professional training. Bryn Mawr has a graduate department of Social Economy and Social Research which prepares women for positions in social and industrial work. There is also a Graduate Department of Education for the training of teachers, of which the Phebe Anne Thorne Model School is a part. Wellesley provides some work for prospective kindergarten teachers and also courses for the training of teachers of hygiene and physical education. From the foregoing, it is evident that so far as under-

graduate work is concerned, the colleges of this group offer practically no organized courses of professional study. In this connection it is of interest to note that the program of the Connecticut College for Women, founded only about five years ago, incorporated at the outset professional courses to prepare the way for the establishment of various professional schools.

Affiliated Colleges for Women

In this group of educational institutions are included those colleges for women which are under the control of universities for men. There are less than a dozen such colleges, and the relation between college and university varies greatly even among this small number. The selection of Radcliffe and Barnard, however, which are the two best known, together with the College for Women (at Cleveland), representing a different section of the country, seemed to furnish a fair basis for a study of the affiliated colleges for women.¹ In Radcliffe the faculty is composed entirely of men chosen from the Harvard faculty and the courses are identical with Harvard courses. Degrees, however, are conferred in the name of Radcliffe College. Graduates from Barnard and the College for Women, on the other hand, receive their degrees from the university, though the course of study and faculty are largely under the control of the woman's

¹ Columbia and Harvard Universities are members of the Association of American Universities and Western Reserve University is listed by the Association. All are listed by the Carnegie Foundation and have chapters of Phi Beta Kappa.

college. For purposes of valid comparison, only the undergraduate college of arts and sciences for men was considered, since that is most nearly parallel to the woman's college:

	Students
Barnard College -----	664
Radcliffe College -----	560
College for Women -----	542

	Students
Columbia College -----	1,486
Harvard College -----	2,182
Adelbert College -----	365
(Western Reserve University)	

In considering the required work in these colleges, it was found that the members of the two groups differ far more widely among themselves than do colleges of the independent type. The number of semester hours required is approximately as follows:

Barnard -----	56-62 (120) ¹
Radcliffe -----	6-18 (102-105)
College for Women--	18 (120)
Columbia -----	39-45 (124)
Harvard -----	6-18 (102-105)
Adelbert -----	34 (120)

Differences between the subjects required by Barnard and Columbia are shown by the following lists:

Columbia: English, Mathematics, Science, Latin, Greek or Modern Languages, Contemporary Civilization.

Barnard: English, Mathematics, Science, Latin or Greek, Modern Languages, History, Philosophy (Psychology), Economics, Fine Arts.

The College for Women prescribes no individual subjects but requires distribution of work among three groups: Language and Literature, Mathematics and Science; History, Philosophy and Social Science. Adelbert College, on the other hand, makes definite requirements of the following:

English, Mathematics; Bible; Chemistry, Modern Languages, Ancient Languages or History. Students at Radcliffe and Harvard must study English and Modern Languages unless the equivalents of certain courses are passed in admission examinations. The number of hours necessary for the completion of major and minor subjects is the same for both parts of the same institution.

When the total number of hours in all subjects offered was compared for the two groups, the results were far from uniform. Taken as a whole, the differences at Barnard and Columbia offset each other—Barnard leading in Classics, English, History, Mathematics and Art, while Columbia is superior in Economics and its allied subjects, in Education-Philosophy-Psychology and in Music. The College for Women seems to have a slight advantage over Adelbert College especially in English, History, Education-Philosophy-Psychology, Mathematics, Art and Music. Harvard, on the other hand, offers considerably more work than Radcliffe in all subjects except Education, Geology, Geography and Biology. Taken as a whole, the colleges for men may claim some superiority in the extent of their curricula.

In making a further comparison with reference to professional training, differences between the three universities were at once apparent. Harvard does not admit women to any of its professional schools, which include the Engineering School, Law School, Graduate School of Business Administration, School of Architecture, School of Landscape Archi-

¹ The figures in parentheses indicate the number of semester hours required for the degree.

ture, Bussey Institution, Divinity School, Medical School and Dental School.¹ At Columbia, the School of Law and the School of Mines, Engineering and Chemistry are not open to women, but the College of Physicians and Surgeons, the New York College of Pharmacy, the School of Architecture, the School of Journalism, the School of Business, and Teachers College admit women students. Moreover, certain courses in Columbia University, in Teachers College, in the Union Theological Seminary and in the New York School of Philanthropy may be counted toward a Barnard degree. By these arrangements, educational opportunities offered by Columbia to the woman student are greatly increased and it is made possible for her to pursue a course in arts and sciences, a professional course, or a combination of the two, and remain at the same time a member of the university community. Western Reserve University admits women to all of its professional schools which include: The School of Medicine, The Law School, The Dental School, The Library School, The School of Pharmacy and the School of Applied Social Sciences. Moreover, in addition to the courses of study in the College for Women leading to the degree of Bachelor of Arts, there is a four-year course in Household Administration leading to the degree of Bachelor of Science.

Coeducational Institutions

Coeducational colleges and universities present a wide variety in

¹ Since this material was prepared Harvard has opened its new graduate school of Education for men and women.

size, in proportion of men to women, in curriculum and in organization. For the purposes of this study a division was made into two groups—state institutions and privately endowed institutions, and an attempt was made to include different types within each group. Since the work of these institutions is the same for men as for women, no comparisons are necessary and a brief summary will suffice.

Of the state universities, California, Michigan, Vermont and Texas were chosen from different sections of the country. All of these universities are listed by the Association of American Universities,² all have chapters of Phi Beta Kappa, and all, with the exception of the University of Texas, are listed by the Carnegie Foundation.

Of the privately endowed institutions, the following were selected as representing a variety of types and sections of the country: Washington University, Oberlin College, University of Cincinnati, Swarthmore College, Vanderbilt University and Pomona College. These institutions are all listed by the Association of American Universities, and also by the Association of American Colleges (with the exceptions of Washington and Vanderbilt); they are listed by the Carnegie Foundation (with the exception of Pomona); and all have chapters of Phi Beta Kappa.

Among the state universities the required work in the college of arts and sciences shows considerable variation. The University of Vermont offers six curricula:

² California and Michigan are members of the Association.

Classical, Literary-Scientific, General Science, Chemistry, Education, and Commerce-Economics. The number of hours required ranges from 38 to 62 and the required subjects common to most of the curricula are English, Modern Languages, Science, Mathematics and Philosophy (Psychology). The University of Texas has five courses: Arts, Business Administration, Journalism, Home Economics and Medicine, the required work varying from 50 to 68 hours and having as subjects common to all, English, Mathematics, Languages, Science, Economics-Government-Sociology and Philosophy (Psychology). The only required study, aside from major courses, at the University of California is English Composition.¹ The University of Michigan provides courses of study in Arts, Science, Chemistry, Forestry and Medicine. In Arts and in Science six hours of Rhetoric are required and twelve hours from each of the following groups: Language and Literature, Mathematics and Science, History and allied subjects. For the two remaining curricula, the required subjects common to both are English, Science, Mathematics, and Modern Languages. Washington and Vanderbilt are the only privately endowed institutions studied which confer more than one degree in the college of arts and sciences.

The total ratio of required sub-

¹ 124 semester hours are required for the degree.

jects to total number of hours is as follows:

Oberlin	48-56:120
Washington	39-45:120
Cincinnati	56:124
Swarthmore	43:124
Pomona	54-60:126
Vanderbilt	50:128

The subjects common to the majority of these institutions are Ancient and Modern Languages, English, History, Philosophy (Psychology), Mathematics and Science.

The number of hours required for major and minor subjects in state and privately endowed institutions is much the same. State universities show greater variation in required work and a wider range of subjects included in their complete curricula. Moreover, with the exception of Vermont, they offer more courses in practically all subjects common to the two groups. This is particularly noticeable in Modern Languages, English (especially at California), Economics and its allied subjects, and Science.

The professional training provided by coeducational institutions as a group, both in special curricula and in professional schools and colleges, is varied in nature and quite extensive in amount. This will be enumerated in detail in the second part of this paper.

The foregoing descriptive study of colleges and universities representing the three types,—independent, affiliated and coeducational, has shown that in the first two there is but little difference between the curricula for men and for women if the comparison is limited to work in arts and sciences. There is a tendency among the colleges for women to

emphasize Literature, Languages and the Fine Arts, although this is by no means at the expense of Mathematics, Science, or History and its allied subjects. The difference lies in the fact that institutions for men have developed professional training while colleges for women, with the exception of some institutions of the affiliated type, have made almost no progress along this line.

When women's colleges came into existence, it was still necessary to demonstrate that women were capable of performing mental work of the character provided for men and the course of study was therefore closely modelled after that of institutions for men. With the passing of time, men's colleges have broadened and diversified their curricula, but thus far women's colleges have made little effort to follow their example. With the increasing complexity and specialization of our business and professional life, a higher degree of preparation is demanded of the college graduate, and this pressure has led to a corresponding development within the institutions for men. The opportunities for women in the professions and in business are not so numerous as for men, and according to the prevailing opinion of college authorities, home-making and teaching, which claim the majority of women graduates, require no special preparation. For these reasons, there has not been so insistent a demand for change and expansion in the course of study.

Coeducational institutions admit men and women on equal terms to all departments, so that the problem here is different; for

women have the same opportunities for professional training that men have. Whether this practice is sound in principle and successful in execution is a question which will be discussed in a later section.

In considering the general problem of professional training for women, the first question which naturally arises is how to justify the inclusion of any training of this kind in their college education. Do not the curricula of the independent and affiliated colleges, as at present constituted, offer all that is necessary for the higher education of women? With this question we raise the general problem of so-called "cultural" as opposed to "vocational" education. This is one of the great storm-centers in the field of education today. Even the humanities and pure sciences have declared a truce in order to join forces against a common enemy,—the vocational and technological interests. Any attempt to reach a solution of this much argued question would carry us too far afield. In many respects the antithesis between vocational and cultural is largely verbal because it is impossible to draw a clear dividing line between them. For instance, the study of Latin or Mathematics may be for a purely vocational purpose, that is, as a preparation to teach them. On the other hand, if the term vocational is used in its broadest sense as the training of an individual toward the work for which he or she is best fitted, there is no reason why such an education should not be cultural as well. For example, the woman who plans to enter the business world needs a

broad literary and scientific training as a foundation for any technical preparation which she may find necessary. These two aspects are not mutually exclusive, as would appear from a great deal of the discussion concerning them, since, when the success of a woman is measured by her contribution to society as a whole, we see that both are essential and the barrier between them falls away. While it is impossible within the limits of the present study to give adequate consideration to this problem, certain considerations may be urged in favor of the development of professional training for women in institutions of higher learning.

Any study of professional training for women is complicated at the outset by the fact that the average woman looks forward to two vocations—that of home-making and that of the profession chosen as a means of support or of service. Whichever one is undertaken first, the other is at least a possibility. Sometimes the two come into conflict and a choice must be made between them.

Let us consider first the need of professional training for the home-maker. Until the movement for their higher education began, women usually regarded marriage as their only possible career. With the opening of schools to women and with the extension of their world into professional, business and political spheres, this career has seemed to lose its pre-eminence. Perhaps one reason for this is the entire exclusion from the average college curriculum of any reference to home-making as a profession, although in the census made by the

Association of Collegiate Alumnae,¹ the percentage of those who married (39.1%) was found to be greater than the percentage of those engaged in all occupations other than teaching (22.8%).

The first figure mentioned is not an accurate index for it does not include many members of the younger and larger classes, since there is an average period of five years between graduation and marriage. So long as the colleges give no recognition to the importance of this occupation, so long will the college graduate fail to see its vital necessity and real dignity. Yet failure or success in this career involves far-reaching consequences. The efficiency and happiness of all the members of a household are to a large extent in the hands of the wife and mother, and this puts upon her a heavy responsibility which cannot be shifted to the shoulders of servants, no matter how numerous or how well-trained. Moreover, society as a whole is vitally concerned in the vocational fitness of every mother, for the home is a fundamental social institution and, if its rightful position is to be maintained, the profession of home-maker must be as dignified and resourceful as any other calling.

At the present time the opinion seems to prevail that a general education is all that is necessary for the efficient housewife. Apparently some kind of intuitive or instinctive knowledge should come to the aid of the home-maker. Yet in such a complicated and varied activity as that of managing a household, it is hard

¹ op. cit. p. 578.

to believe that either intuition or instinct of this kind will be sufficient, were their existence not often disproved. It is true that the college graduate usually has the ability to attack new problems in a way to bring about a tolerable solution; but it is hardly fair for this reason to expose her to the hardship and heartache of learning by experience, even if that learning is subject to intelligent guidance, when she might be prepared in advance with some knowledge of the rudiments of her new profession. It may be suggested that the student's own home should furnish the necessary training, but the summer vacation does not always offer a very favorable opportunity, especially if no thought has been directed to the vital and educational significance of such problems during the college year. Moreover progress in domestic pursuits, like progress in anything else, depends upon keeping abreast of the scientific aspects of the matter at hand, and a girl who learns from her mother does not always learn the most efficient methods. With the increasing difficulty in securing servants, prospective home-makers need to be acquainted with all the most modern mechanical devices for supplanting human labor. Moreover, the colleges should do their share of research in discovering more labor-saving methods and machinery. There is the further possibility of high school courses or cooking school lectures. These, however, are likely to be elementary and concerned more with the technique of household science than with the broad foundations

and cultural aspects of the subject.

Nor is the value of training in home economics limited to the woman who marries, for many unmarried women find themselves with the conduct of a household on their hands. They, too, might be freed from anticipation of a good deal of drudgery and unhappiness by some knowledge of home management. Furthermore, with the increase in the number of wage-earners, there is a corresponding proportion of women who must live away from home and who would benefit by one of the many forms of modern co-operative housekeeping. In these days of the high cost of living, women who know something about dress-making and millinery are at a great advantage, not only with respect to the saving of money but also with respect to the possibility of wearing more individual and artistic dress. Home economics, prosaic as it may seem, affords, nevertheless, opportunity for real creation and an expression of personality which might otherwise be impossible. And since, if the course be soundly planned and taught, it must rest upon such fundamental subjects of instruction as Economics, Sociology, Biology, Chemistry, Psychology, Ethics and Esthetics, there is no reason why the application of these to the specific problems of the home should not be creative and cultural in the highest degree.

Leaving for later discussion the practical applications of the above conclusions to the curricula, let us see what reasons can be advanced for the training of col-

lege women in professions other than home-making.

In the first place it may be noted that the woman who later marries very often has need for some kind of professional training. In the census already mentioned which was taken by the Association of Collegiate Alumnae in 1915 among the alumnae of Barnard, Bryn Mawr, Holyoke, Radcliffe, Smith, Vassar, Wellesley, Wells and Cornell, it was found that the median age at graduation was 22 years, while the median age at marriage was 27 years and 3 months,¹ thus leaving an average period of more than five years during which the college graduate seems likely to pursue an occupation of some sort. Moreover after she marries, sickness or death of the bread-winner may throw upon her the burden of supporting herself and her children, with no opportunity for preparation at the time. It should be a source of satisfaction to most women to feel themselves ready to meet such an emergency.

Possibly the best argument for the inclusion of some kind of professional training in the curricula of colleges for women is the fact that so large a proportion of college graduates enter upon some profession. In the census to which reference has been made, it was found that 69.7% of the number reporting² were engaged in gainful occupations at some time after they left college. The number of women entering upon some vocation has been steadily increasing, with a considerable ac-

celeration more latterly produced by the war; for many women have been obliged to undertake work which had hitherto been performed only by men, and this has widened the range of their opportunities also in the after-war period. Moreover, many women of the so-called leisure class, in order to share America's effort, undertook work of some kind, and they will not all be content to return to their former manner life.

A further argument for the inclusion of professional training is the fact that specialized training is more and more demanded and the college graduate without such preparation finds her field for choice of a career becoming limited. It is also true that positions calling for expert knowledge and executive ability are being constantly opened to women and the possibility of securing such positions depends upon training.

For these reasons many women will be forced to forego the advantages offered by colleges for women and enter institutions affording only a narrow and purely utilitarian professional training. Yet the results of this step may be harmful both to the individual and to the college; for it cannot but strengthen the position of a type of school which offers only a limited and a more or less mechanical training. The professional school is feared by the college, because it so often falls into a superficial pandering to popular demand, but if the college has the strength of its convictions, it should be glad to humanize, rationalize and make good and beautiful every vocation and pro-

¹ op. cit., pp. 576, 579.

² Out of 23,582 living graduates, 16,739 or 71% reported.

fession to which men or women are called.

It may be urged that all professional training should follow graduation from a college, and there are undoubtedly many advantages in this plan. Unfortunately the majority of women cannot afford so great an expenditure of time and money, but must often begin to earn immediately after a four year college course. This is indicated by the figures obtained from 3,203 college graduates between 1910 and 1915;¹ for of this number 2,351 began work in less than one year after graduation; 559, after less than two years; 183 after less than three years; and only 70 later than three years after graduation.

Finally, a preparation for some calling in life guards one against wasted or scattering effort, since it tends to provide both a standard of choice, and a means of organized effort. Moreover a definite career relates the individual more closely to her environment and thus makes her more truly a social being. Both of these functions are of the greatest worth to college students.

The value of professional training, however, is not limited to students as individuals; the whole college community is benefited. Perhaps the chief criticism of colleges for women is that they create a limited and artificial environment often quite out of touch with the everyday world. There could be no better antidote for this than the atmosphere of reality and far-reaching interests brought about by a more intimate relation of the college world to

life outside, through the medium of courses of study which give a cultural and scientific training for future vocations. In addition to this broadening and vitalizing effect upon the student, the college is likewise enabled to extend its sphere of influence far more widely, since it can definitely affect many fields of human endeavor. This is needed to help check the mercenary and short-sighted policy of much of our business and industrial life; and if the colleges will not take these matters to heart, what institutions will?

Society as a whole benefits whenever it is touched with the spirit and ideals of institutions for higher learning, and this would be a necessary consequence were there a closer relation between college curricula and the life of the world. One of our most pressing social problems is the cleavage and ill-feeling between the leisure and labor classes. This opposition finds another expression in our disputes over vocational and cultural education. In lesser degree the same cleavage is found between the learned professions and manufacturing, for instance. These are but the current forms of the division made by Plato between men of the laboring and the military classes, and those who are capable of governing; and by Aristotle between those individuals who exist as means for the ends of others, and those who are ends in themselves. Since the former classes were usually slaves in the Greek state while the latter enjoyed freedom, the gulf between them was wide and almost impassable. Yet the survival of an

¹ op. cit., p. 575.

older aristocracy still continues its harmful influence in a society which is avowedly democratic, and this artificial distinction lies at the root of many of our present seemingly insoluble problems. If the colleges and universities are to maintain a position of leadership they must exert their influence against this unnatural condition by teaching that every individual should be capable of self-support, that labor of all kinds is noble, and that leisure and the things which make for culture rightfully belong to all. To this end a desire to share in the world's work should be encouraged in college students and in no way can this be better accomplished than by developing suitable parts of the curriculum to furnish a professional training which shall be truly cultural. A further contribution to this end might be made by research connected with various occupations, thus helping to afford them a more scientific basis and to lift them out of the realm of mere technologies.

Let us now see to what extent colleges and universities of the three types offer work which may be used in preparation for some of the vocations upon which the largest number of women graduates enter, using the census already mentioned as an index.

The first occupation opened to women was **teaching**, and this now claims about half of the college graduates, as is shown by the following figures.¹ Of the 11,663 graduates (69.7% of those reporting) who were engaged in gainful occupations at some time after

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¹ op. cit., p. 560.

they left college, teaching claimed 83.5% (58.2% of all the graduates reporting). Since so large a proportion of college graduates become teachers, it would seem that more attention should be given to their preparation. Yet the prevailing opinion is that such a calling requires no specific training—that any college graduate who knows her subject is capable of teaching others. But the person who has the ability to master a subject may not be able to present it in such a way as to appeal to those who are less mature. She may not have the personality to win respect and affection from her pupils and thus succeed in discipline. That these statements are true is shown by the lamentable failure of some of our college-trained teachers, and by the inadequate preparation of freshmen who enter our colleges and universities.

The necessary training of a teacher may be given by the various departments of the college which deal with high school subjects, by a Department of Education, or by both. The former gives the student special assistance in teaching a particular subject; the latter furnishes her with a historical background, and a knowledge of the educational, psychological and philosophical principles involved. Both are desirable if one is to have a fit preparation for this vocation. Since most college graduates teach in high school and deal with the difficult period of adolescence, it ought to be obvious that knowledge of the psychology and pedagogy of adolescence is indispensable. It is also necessary that the prospective teacher should learn the place of education in

the world's progress and be able, in the light of history, to comprehend more fully the significance and value of present educational theories and movements. She should also know something of systems of education of various kinds and in other parts of the world. In order that her work may have a scientific basis she should understand and be able to make use of the psychological principles underlying the educational process. Moreover she should realize the philosophical implications of education and its place in the hierarchy of learning. With this kind of background the prospective teacher comes to feel the dignity of her profession and has at her command a wealth of knowledge and experience from which she may draw to meet her own peculiar problems. This preparation gives her a sense of power as well as a sense of her responsibility to mankind, present and future.

The colleges offer some work of this kind, although by no means so much as might be provided without destroying the balance of the curricula. Most of the institutions of all three types offer courses in History and Principles of Education, Administration and Method, Educational Psychology and Mental Tests. Several make provision for observation and practice teaching, two give courses in Elementary Education, while a number list additional courses of various kinds. In methods and subject-matter, courses in the various high school subjects are provided in the following order: Science, History, German, Latin, English, French, Mathematics, Music, Home Economics, Greek.

In addition to these courses, the following institutions have schools of Education or special four year courses for prospective teachers:

Columbia University—Teachers College.
College for Women—Special four year course for teachers of household arts.

Michigan—Course in Education leading to Teacher's Diploma.

California—School of Education.

Vermont—Curriculum in Education.

Texas—Department of Education comprising four schools.

Special four year course in Home Economics for teachers under the Smith-Hughes Act.

Cincinnati—College for Teachers.

Oberlin—Teachers' courses in Physical Education open only to men and women doing major work in that department.

Pomona—Prescribed courses of study in preparation for teaching music or art in the public schools. Candidates for the B. A. degree must ordinarily spend an additional year to complete one of these courses.

Provision is made by the following to aid graduates in obtaining the necessary state teachers' certificates: Holyoke, Goucher, Barnard, Michigan, Texas, Oberlin, Vanderbilt, Swarthmore, Cincinnati and Washington.

The census already referred to indicates by the following figures the fact that the number of women graduates engaged in gainful occupations other than teaching is increasing:

	Per cent.
1880-1890 -----	27.5
1890-1900 -----	29.2
1900-1910 -----	33.7
1910-1915 -----	34.5

Since this growth is likely to continue and to be hastened by the effects of the war, training in a variety of occupations is of increasing importance.

At the time of the census the vocation of the group second in

number to that of teaching was **social service**. The 471 women in this group were occupied as follows: charity organization and work with families (114), industrial and vocational work (86), health (67), settlement work (67), child welfare (45), correction and treatment of delinquency (33), recreational and club work (17), propaganda—peace, suffrage, temperance (15) civic improvement (14) housing (3), rural social service (2), miscellaneous (8).

The colleges make some contribution to training for this work, though here, too, much more might be done in the way of organizing groups of studies helpful toward some specific form of social work. Among the large number of courses which may be used in preparation for social service are the following, offered by most of the colleges: economics, sociology, applied psychology, statistics, social work, labor problems, business and industrial organizations, city problems. Provision for field work in social service is made by the following: Goucher, Smith, College for Women, Michigan and Swarthmore.

Closely related to social service is the work of the woman who interests herself in city, state or national affairs. The number in this class is increasing rapidly by reason of capacities developed during the war, and also because of the broadening public duties of women. Courses in city, state and national questions are well represented in the college curricula. Since we have learned from the war that national policies are inextricably linked with those of other countries, study of interna-

tional problems is also necessary for one who desires to take any real part in American affairs. Training in Public Speaking is also of value, as well as the poise and ability to handle people which usually result from college activities outside the class-room. The general success of the college woman as a leader is too well-known to need discussion here.

In addition to the courses already listed, some of the institutions studied have special courses of study, or professional colleges, which give training for social and public service:

- Western Reserve University — The School of Applied Social Sciences. College for Women—Four-year course in Home Economics for social workers.
- California—College of Commerce.
- Vermont—Curriculum in Economics and Commerce.
- Michigan—Curriculum in Municipal Administration. Course of study for Mental Testing in Social Clinics.
- Washington—School of Commerce and Finance.
- Cincinnati—College of Commerce.

The next largest group (293) reported in the census taken by the Association of Collegiate Alumnae was engaged in **library work** as organizers, superintendents, librarians, cataloguers, classifiers and indexers. For library work no technical preparation is provided in the independent colleges or in the affiliated colleges, with the exception of the College for Women, where students may receive the degree of Bachelor of Science and the certificate of the Library School at the end of four years. Among the coeducational institutions, Texas and California offer a few courses in library science and Oberlin gives work in bibliography.

The next group in the census consisted of 260 women who held positions in the **business** world, some as executives and some as assistants. The varieties of work listed are of interest in showing the many fields which have already been entered by women: mercantile—buyers, clerks, owners, manufacturers (53), publishing (37), manufacturing—executives, forewomen, secretaries, translators (24), banking (18), advertising (14), insurance (14), public utilities (8), public type-writing (2), miscellaneous (90). Business occupations listed as miscellaneous include in part: accountancy; management of apartment house, laundry, hotel, club, employment bureau, cemetery association, detective agency, public market; electrical contracting; dressmaking; industrial engineering; real estate.

No technical training for work in the business world is provided in either the independent or affiliated colleges with the exception of Barnard where a student may, upon completion of two years of college work, transfer to the School of Business in Columbia University. In the group of coeducational institutions, there is considerable opportunity for work preparatory to business:

Michigan—Curricula in Business Administration and in secretarial work.
California—College of Commerce.
Texas—School of Business Administration.

Vermont—Curriculum in Economics and Commerce.

Washington—School of Commerce and Finance.

Cincinnati—College of Commerce.

The 203 women engaged in **literary work** represented the following occupations: author, bibliographer, lecturer, editor, re-

porter, correspondent, critic, reader, reviewer, press agent, translator. For some of these there is no specific professional preparation, although departments of English can give valuable assistance to those who look forward to such careers. The only organized preparation for literary work found among the independent and affiliated colleges is at Barnard where a student may, upon completion of two years of college work, transfer to the School of Journalism in Columbia University. Among institutions of the third type, Texas has a School of Journalism; Michigan has curricula in the subject; and California and Vermont provide certain courses.

The next group (195) were devoting themselves to **religious work** as deaconesses, missionaries, nuns, pastors' assistants, Y. W. C. A. secretaries, and so on. Of the total number, 162 were working in the United States and 33 in foreign countries. Most of these occupations require special training and because of the variety of religious organizations there would be little possibility of offering college courses which would be generally acceptable. However, training in social service is of value in all work of this kind and the colleges for women provide a considerable number of such courses, as has been shown already. Barnard students have the privilege of taking certain courses in Union Theological Seminary. The College for Women provides a course in The Social Institutions of Religion. Moreover, Western Reserve University of which the College for Women is a part, has established an Insti-

tute for Religious Education. Among the coeducational institutions Vanderbilt has a School of Religion and Oberlin a Graduate School of Theology.

Administrative work in the field of education claimed 170 women, who held positions as heads of houses, advisers, registrars, secretaries. Some of these demand business training and others require executive ability and social gifts. The former has already been considered. For the latter the many activities of college life afford excellent training.

The next group (162) were giving **personal service** as private secretaries, companions, and mother's helpers. The qualifications are much the same as those mentioned for the preceding group.

Professional pursuits claimed 149 graduates, distributed as follows: medicine (84), nursing (30), law (22), miscellaneous (7), architecture (4), engineering (1), and the ministry (1). The independent colleges offer almost no work of this nature. Smith, Holyoke and Goucher list certain courses as helpful to those who plan to study medicine; and a few courses in Architecture are given at Smith, Vassar, and Goucher. Among the affiliated colleges Radcliffe provides no instruction for these professions. At Barnard, a student who completes two or three years of work in arts and sciences may transfer without examination to the College of Physicians and Surgeons or to the School of Architecture of Columbia University. Moreover, certain courses in the School of Architecture are open to regular students in Barnard College.

The College for Women permits its students to elect all of their senior work in the Schools of Law or Medicine of Western Reserve University. That coeducational institutions as a group are particularly well equipped to give preparation for these professions may be inferred from the following list showing the number of professional schools incorporated in the institutions studied: chemical engineering (8), mechanical engineering (8), civil engineering (8), medicine (7), electrical engineering (7), law (5), dentistry (4), pharmacy (4), nursing (4), architecture (4), mining engineering (2), ministry (2). Most of these colleges and universities permit election of certain studies in the arts and science curriculum which will shorten later work in one of the professional schools.

The remaining groups in the census are small and need not be considered in detail: scientific pursuits (85), art (50), household arts and management (47), music (32), agriculture (30), theatrical pursuits (21), museum work (16), miscellaneous (31). The independent and affiliated colleges for women offer incidental training for a few of these occupations, such as scientific pursuits, art, music, theatrical pursuits, and museum work. In addition to this general preparation, the College for Women provides a special four year course in Household Administration and thus fits students for positions listed under Household Arts and Management. Moreover, by an arrangement with The Cleveland School of Art, a six-year course of study is offered, leading to the degree of Bachelor of Science.

Special work of this nature offered by coeducational institutions may be enumerated as follows:

California—College of Agriculture.

California School of Fine Arts.

Vermont—College of Agriculture.

Washington—School of Fine Arts.

Cincinnati—School of Household Arts.

Courses may be elected in Art Academy of Cincinnati.

Oberlin—Courses in the Conservatory of Music.

This exhausts the list of professions recorded by the census of the Association of Collegiate Alumnae, but leaves for consideration the kind of preparation provided for the home-maker by the three types of institutions. A brief summary will show the number of hours offered in Home Economics by schools of the three kinds:

Independent—Goucher	33
Affiliated—College for Women	72
Coeducational—Vermont	12
“ —Texas	72
“ —California	90

The foregoing pages have attempted a brief summary of the preparation afforded by the three types of institutions for those professions which are most largely chosen by women college graduates. We shall now, in conclusion, endeavor to draw from these facts some suggestions for the further development of professional training by colleges and universities which admit women students.

In the first place we may note that in all institutions, for men as well as for women, there is urgent need for vocational guidance.¹ There should be in each

school some person, committee or bureau, in possession of information about all kinds of occupations which are suitable for college graduates.² By this means it would be possible for a student to survey the field before making a decision and thus avoid a more limited choice among the professions which are best known. Moreover there should be available expert advice about the educational and personal qualifications necessary for each occupation. This would help the student in planning his or her college course and would prevent some of the misfits due to lack of the kind of personality requisite for success in a certain profession.

Secondly, it is suggested that in all instruction given by the colleges an attempt be made to relate the subject-matter to life and to the practical needs of the students, in order that the influence of higher institutions of learning may extend as widely as possible.

In the third place, since the average woman can profit by some training in Home Economics, it would seem that all institutions training women should provide work of this kind from which a student may elect according to her needs and desires. A general training may be supplemented later if necessary and the initial course need therefore not be excessive in its demands. A woman might well know how to buy, how to plan and prepare wholesome food, how to provide suitable and artistic clothing and how to make her

¹ John M. Brewer: The Need for Vocational Guidance in Colleges. School and Society, Vol. XI. No. 279, pp. 511-517.

² Bulletin on Vocations for Business and Professional Women compiled by the Bureau of Vocational Information. May, 1919.

home comfortable and beautiful. Her education should also include training in handling the bugbear of household finance, some knowledge of the care of children, some training in first aid and simple nursing for the many emergencies of the home, and above all the power to co-ordinate and expedite the working of the household machinery so that the home-maker herself may have time for rest and for the pursuit of her own interests.

The amount of work necessary for a broad foundation in this science could be included in the number of hours required for a major or a minor, or it could be included in the free electives without in any way interfering with the subjects which are at present required of all students. As an example of what the course of study in such a department might cover, it may be of interest to enumerate the courses offered at Goucher:

	Semesters.
The Foundations of Home	
Economics -----	1
The House -----	2
Textiles and Clothing -----	2
Foods -----	2
Home Management and Dietetics -----	2
The Chemistry of Foods and Nutrition -----	2

Finally, it is suggested that suitable parts of the curriculum be developed to afford some degree of preparation for a few of the occupations which large numbers of graduates undertake. The demand for such a step is most urgent in the independent colleges, for they provide no organized professional training. Since so large a proportion of women graduates become teachers and since this profession is so vital a

necessity, the most obvious need of training lies here. Most of the colleges of this group have already developed some work of this character. The requirements for proper **training of teachers** may be stated as follows: (1) the general courses usually offered by departments of Education should be given such as History, Principles and Philosophy of Education, Educational Psychology, Mental Measurements, Administration and Method. (2) In addition to these, the number of "teachers' courses" should be increased so as to embrace all the subjects generally taught in a high school. Moreover, it is necessary that these courses should not only give knowledge of the subject, but also real assistance in its pedagogy. To this end the instructor should, wherever possible, be one who has had experience in high school work, so that the college student may be brought face to face with some of the concrete problems concerned with the presentation of the subject-matter in a manner comprehensible to those of high school age and under the conditions of high school instruction. (3) Practice teaching and observation are of the greatest importance since by this means the student may have actual experience in teaching and thus learn whether she has the necessary qualifications for this profession. (4) It should also be the purpose of the college to assist students to plan their work so as to secure the necessary teachers' certificate. (5) For the supervision of athletics, publications, plays and other activities, which are a part of the work required of a high school teacher,

the woman's college affords valuable training through its college life. But these activities might be more definitely pointed toward a future career than is often the case.

Preparation for social and public service is also well within the power of the independent colleges. In order to form an idea of the extent of training for social service already provided by the women's colleges it will be of assistance to compare it with the program of Simmons College which is, by the will of its founder, a vocational college for women. The four-year course of the School of Social Work leads to the degree of Bachelor of Science and consists of the following studies:

FIRST YEAR	Hours
English -----	6
French or German -----	6
Inorganic Chemistry -----	8
History -----	6
Physical Training	
SECOND YEAR	
English -----	6
Modern Language -----	6
Economics -----	6
Biology -----	3
Bacteriology -----	3
Sanitary Science (Public Health) -----	1
Psychology of Child Life -----	2
Sociology (The Family) -----	2
History -----	6
THIRD YEAR	
Psychology -----	3
Social Service -----	5
Sociology (Social Institutions) -----	3
Dietetics -----	3
History of Education -----	3
Principles of Teaching -----	2-3
Institutional Accounts -----	3
Economics of Consumption -----	6
Elective	
FOURTH YEAR	
Statistics -----	2
Theory and Practice of Social Work: class instruction, practice, special topic in connection with field work.	

If this course of study is compared with the required work of the independent colleges for women it will be seen that, with the exception of Latin and Greek, the academic work required at Simmons is quite as extensive as in the other colleges studied. Most of the women's colleges offer the general work in Economics, Sociology and Statistics which Simmons requires and also the more specialized studies such as Biology, Bacteriology, Public Health, Psychology of Child Life, History and Principles of Education; and Goucher has in addition a course in Dietetics. The general course in Social Service at Simmons includes the courses listed as Social Work in the women's colleges. The chief difference, then, lies in the practical experience which is gained through the work of the fourth year, and even here one or two of the colleges for women provide some field work. If the women's colleges would permit sufficient freedom of election, would organize the courses already offered, and would provide a greater opportunity for field work, perhaps during vacations, the girl who wishes to enter the field of social service would have little difficulty in securing the necessary training during her college life.

Almost two-thirds of the required and elective work in the course at Simmons in **preparation for library work** consists of academic work which is given in all the colleges. Since none of the independent colleges offers any technical work in library science, the girl wishing to enter this field would do well to plan her college

course with a view to securing her specialized training after graduation. Simmons and other schools provide a one-year program for college graduates. Vacations may also be utilized to gain practical experience in the work.

Training for the business world must of necessity be varied since there are so many kinds of occupations included under this term. For this reason, anything more than a general introduction would be impossible in a woman's college. The School of Secretarial Studies at Simmons includes about 60 hours in English, Modern Languages, History, Economics and Science. The professional studies include Penmanship, Shorthand and Typewriting. In the fourth year the course is differentiated in order to prepare for several types of work. By choosing the proper college courses and by doing practical work in Shorthand and Typewriting during the college year or in vacations, the student of a woman's college might approximate the course given at Simmons, with the exception of the more highly specialized work.

It is doubtful whether the independent colleges for women would be able to offer any organized training for the other occupations listed in the census, but if they should develop sufficient preparation for teaching, social service and business, they would minister to the needs of the great majority of their students. In addition they ought to be in a position to give students contemplating other professions expert guidance in planning courses of study so as to shorten later specialized training.

The foregoing suggestions apply in the main also to colleges for women of the affiliated type. These institutions as a group offer better training for the prospective teacher than do the independent colleges, but there is still room for improvement. The same is true of preparation for social service and for business. This type also affords a better training for literary work and the professions, such as medicine and law. The affiliated colleges studied have the advantage of location in or near a large city which provides opportunity for field work and likewise that of additional courses in various subjects offered by the universities of which they are a part, or by neighboring institutions.

With regard to professional training, the affiliated colleges hold a position intermediate between the independent colleges for women and the coeducational institutions. Radcliffe provides no professional training, with the possible exception of preparation for teaching, and is thus like the independent colleges. Students at Barnard and the College for Women, on the other hand, have opportunities practically the same as those for men and thus resemble the coeducational institutions. Because of this similarity these colleges must also be included in the consideration of the chief problem presented by the coeducational institutions: namely, whether it is sufficient to provide for women the same kind of professional training as for men.

A comparison of the occupations chosen by women with the nature of professional education provided by institutions of this

type shows that the greater part of such training is directed toward occupations which comparatively few women choose. The professional schools or curricula common to at least four institutions of this group are the following:¹ Engineering (8), Medicine (7), Business (6), Law (5), Pharmacy (4), Dentistry (4), Architecture (4), Fine Arts (4), Nursing (4), Education (4). Of these professions, Business and Education rank high in the list of college women's occupations but all the others, with the exception of the Fine Arts, are included under the title of Professional Pursuits which was ninth on the list of occupations in the census. Thus we see that the problem of the nature of professional training for women in coeducational institutions is a very real one. Unfortunately it is difficult and perhaps impossible to solve it in view of the present status of our knowledge.

There are, indeed, certain statistical studies, such as the census already referred to, which show the occupations chosen by women graduates. But these are not so reliable an index as might be supposed. In the first place, in many cases a woman's choice of a career may not be made as intelligently as it would be under more expert vocational guidance; for it is true that many students select one of the better known occupations by way of experiment, intending later to discover where their real interest lies. It is to remedy this condition of affairs, with its consequent waste of time and effort, that vocational guid-

1—The figures represent the number of institutions studied which have such schools.

ance for college students is being promoted.¹ Moreover, graduates tend to choose professions for which their college training has prepared them, and, on the other hand, to plan their courses with a view to finding places in occupations already open to women. This is a circular process and gives no indication of what their choice would be under ideal conditions. For such reasons studies of this kind are not an absolutely reliable guide to the real vocational tendencies of college women. Much the same criticism may be made of the use of figures concerning the subjects which women elect in college as an index to their interests. This fact was brought out in a study² made in 1917 among the students of six colleges for women. The following list shows the order in which courses in various departments were elected:

- 1—English.
- 2—Political Science.
- 3—Economics and Sociology.
- 4—Romance Languages.
- 5—German.
- 6—Education (Psychology).
- 7—Social and Political Science.
- 8—History.
- 9—Arts.
- 10—Music.
- 11—Biology.
- 12—Mathematics.
- 13—Latin.
- 14—Philosophy (Psychology).
- 15—Chemistry.
- 16—Botany.
- 17—Physics.
- 18—Biblical Literature.
- 19—Greek.
- 20—Astronomy.
- 21—Geology.
- 22—Physiology.
- 23—Economics.

¹ Compiled by the Bureau of Vocational Information, May, 1919.

² H. L. Dealey: *College Curricula and Interests of College Women*. School and Society, Vol. X, No. 245, Sept. 6, 1919, pp. 294-299.

In questioning the value of these figures as a trustworthy estimate, the author points out the following considerations: (1) "...The real interests of students do not mature until one, five or ten years after graduation, for not until then does the apparent unanimity of collegiate 'interests' dissolve into a variety of individual applications."¹ (2) Students are attracted to courses in literature and languages because these are better known and more strongly intrenched than the sciences which were a later addition to the curriculum. (3) Other factors which influence election are geographical location, and environment, popularity of the faculty in certain departments, college tradition, and any number of chance factors.

A study of the kind just described is, however, a valuable indication of present conditions and, if it be repeated from time to time, the results would undoubtedly show in what directions women's interests are trending; but this information would never fully answer our question whether they are developing in the right direction.

Nor does the voluminous literature concerning the abilities of men and women give much assistance in solving the problem, for the usual treatment of the subject is not based upon experiment and ranges all the way from careful observations upon the work and achievements of women to theoretical comparisons based on **a priori** assumptions. It is to be noted also that the latter are often neither scientific nor dis-

passionate. In fact some degenerate into mere wrangling, with the author's conclusions determined in advance. The chief value which this so-called literature of opinion possesses is found in the suggestions it may offer concerning new aspects of the problem or new points of attack.

The hope of a real solution rests mainly upon scientific experiment, but since this is a comparatively new field, work has not yet been carried far enough to justify any sweeping conclusions. A summary of such experimental results as have been secured is given by Dr. Leta S. Hollingworth in a chapter on the vocational aptitudes of women.² The following statements summarize her conclusions: (1) "So far as the literature of fact tells us, we know of no considerable sex differences in **average mental ability**..which would call for differentiation of vocations on the ground of sex."³ (2) "There is little or no agreement among those best qualified to speak, as to what constitutes the scientific method of measuring **comparative variability**. But according to the methods now deemed the most reliable, and according to those studies wherein presumably correct methods of measurement have been employed, there is no reason to suppose that there is any sex difference in variability, so far as the numerous traits

² H. L. Hollingworth: *Vocational Psychology*, 1916. Chap. X.

Cf. also L. S. Hollingworth: *Comparison of the Sexes in Mental Traits*, *Psych. Bull.* Vol. 15, No. 12, pp. 427-432.

¹ *Ibid.*, p. 298.

³ *Ibid.*, p. 228.

tested are concerned.”⁴ (3) To the question whether there are any **special causes of intellectual inefficiency** among women (in particular, functional periodicity) “we must answer . . . : There is very little experimental evidence on which to base a reply, but the few data which we do possess show no influence, either detrimental or beneficial.”¹ (4) “Are there any **innate sex differences in affective or instinctive equipment** that would naturally lead to a vocational differentiation of the sexes? Here we must acknowledge ourselves to be entirely without a literature of fact.”¹

The last question raised is the most fundamental and the lack of experimental data is therefore a great handicap. In view of physiological differences between the sexes one would naturally suppose that there would be some corresponding psychological differences,—perhaps in the organization of abilities common to both sexes, perhaps in the abilities themselves. In the first case, it might be discovered by experiment that the interests of women focus about concrete situations and problems; in the second, it might be demonstrated that women excel in some specific ability or abilities, such as memory. This need not argue a general inferiority or superiority of women over men, but it would point to a differentiation in vocation which might take several forms: (1) the choice of different kinds of professions; (2) the development of new professions for women, be-

cause such a large proportion of present vocational training is directed toward occupations which a comparatively small number of women choose, for example, law and medicine; (3) differentiation within the professions, for instance, in business—secretarial work for women, executive work for men. The foregoing is, of course, only a suggestion since experiment may show that there are no marked psychological differences between men and women. This will be a difficult problem to solve experimentally since it is complicated by the existence of individual differences and by the marked effects of training and social convention which early make their mark on the individual.

The whole question of the nature of the professional training best adapted to the needs of college women can be answered only by the carefully studied results of wide experience and by direct experimentation. Toward this end all institutions which provide college or university training for women should co-operate with one another and with the various outside agencies already at work. The independent colleges for women are in a particularly favorable position to do this since they need to consider the problem in the interests of but one of the sexes and have therefore greater freedom for experimentation. But the affiliated and coeducational institutions are also vitally concerned. “Theoretically”, says Dexter, “the same instruction for both sexes is right, only if the aim of education is identical for the two, i. e., if they are to be

⁴ Ibid., p. 233. Cf. L. S. Hollingworth: *Variability as Related to Sex Differences in Achievement*. Amer. J. of Sociol., 1914. Vol. 19, pp. 510-530.

¹ op. cit. p. 237.

competitors in the same kinds of work.''¹ But until the truth or falsity of this is demonstrated, institutions of this type cannot

¹ E. G. Dexter: History of Education in the United States. 1904. p. 450.

claim to give equal educational rights to men and women. What they really give to women is the right to share equally in a kind of education which was developed originally to meet the needs of men.

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